



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,238	12/20/2001	John P. Sherwin	1238.17519	9086

7590 01/13/2004

RYAN KROMHOLZ & MANION, S.C.
Post Office Box 26618
Milwaukee, WI 53226-0618

EXAMINER

CHIN, PAUL T

ART UNIT	PAPER NUMBER
----------	--------------

3652

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,238

Applicant(s)

SHERWIN, JOHN P.

Examiner

PAUL T. CHIN

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-22 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 12-15, 17, 18 and 24 is/are rejected.
- 7) ☒ Claim(s) 16 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed October 20, 2003, and the arguments presented therewith have been carefully considered. Applicant cancels claims 6,8-11, and 19. The rewritten new claims 20-22 and 25 are allowed; claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims; and claim 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. In regard to claims 1-5,7,12-15,17, and 18, they are not persuasive and the claims are rejected under 35 U.S.C. 102(b) as being anticipated by Holter (5,727,832) and a final office action follows as below.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "50" (distal end of the wrist spacer) and "52" (proximate end) (see page 11, lines 16 and 17). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "50" has been used to designate both "wrist spacer" (page 11, line 17) and "controller" (page 11, line 29, and figure 2). A proposed drawing correction or corrected

Art Unit: 3652

drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: it appears on page 11, line 14, that the figure number "9" should be changed to -- 4 -- because figure 9 does not show a wrist spacer "48". Appropriate correction is required.

Claim Objections

5. Claims 15 and 22 are objected to because of the following informalities: it appears that in claim 15, line 4, that the word "devices" should be changed to -- cups -- since the "suction cups" is recited in line 2, and in claim 22, line 15; a comma notation -- , -- should be inserted after the word "points". Appropriate correction is required.

6. Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It is pointed out that a structural limitation of "a plurality of piercing points, said points being retractably mounted to the plate" has been already recited in claim 22, lines 15-16.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3652

8. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "said arm" (claim 24, line 2). It is not clearly understood as to whether "the arm" refers to the "plate" or the "parallel rails" wherein the plurality of suction cups are mounted.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5,7,12-15,17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by **Holter (5,727,832)** (see Paper No. 6).

Holter (5,727,832) discloses an end effector (5) for a robot (75), comprising a vacuum plenum having a mounting plate (10) mounted to the robot; the plate having a first surface and the second surface, the opposite of the first surface; a vacuum port (12) (see Fig. 2) located on the first surface of the plate passing through the plate wherein the vacuum port is being connected to a means for drawing vacuum or a vacuum source (not shown) (Col 3, lines 25-40); a surround (18,18,30,30) located on the second surface of the plate, the surround enveloping the vacuum port (see Fig. 2) wherein the vacuum plenum includes the mounting plate, the port, and the vacuum source; a first gripping element (45) or blade mounted to the plate gripping element having which has a

substantially smooth surface at the outside portion (see Fig. 2), and being *a stationary blade* rigidly mounted generally perpendicular to the plate (10); and a second gripping element (40) or blade *movably mounted* to the plate in spaced parallel relation opposite of the first gripping blade, the second gripping blade having a substantially smooth surface located at the outside surface (see Fig. 1), wherein the gripping blade being movably mounted generally perpendicular to the plate and wherein the first and second blade are located outboard the surround (see Fig. 4).

Re claims 1,13, and 18, Holter's gripper (5,727,832) discloses a surround including a pair of first side walls (18,18) (see Fig. 4, and Col 3, lines 42-49) and a pair of second side walls (30,30) (see dotted lines in Figs. 3 and 4, and Col 3, lines 54-60) mounted on the base plate (10) wherein the first and second gripping elements (40,45) are located outboard of the surround (18,18,30,30) (Col 4, lines 12-23).

Re claim 1, Holter's gripper (5,727,832) also shows that the first and second gripping elements (40,45) being arranged separately and independently from the vacuum port (12) (see Fig. 4). It is pointed out that the gripping element (40) is being coupled a linear slide (68) operating separately and independently from the vacuum port (12).

Re claims 2 and 3, Holter's device (5,727,832) further shows that the second gripping element or blade (40) mounted to a moving means (68) or a linear actuator (Col 4, lines 58-64).

Re claim 5, Holter's device (5,727,832) further shows that the surround (18,18,30,30) is being positioned on the second surface of the plate in a substantially rectangular pattern and whereby the surround forms four perpendicularly arranged walls (see Fig. 4).

Art Unit: 3652

Re claims 7 and 17, Holter's device (5,727,832) further shows a vacuum sensor (17) (Figs. 2 and 4A) mounted on the plate.

Re claims 12 and 15, Holter's device (5,727,832) further shows a plurality of suction cups (85,85) located on an arm (84) (see Fig. 1) and the arm is indirectly mounted to the plate and in substantial perpendicular relationship the plate, and wherein the suction cups further having means for drawing vacuum (see Fig. 1).

Re claim 18, in addition to the end effector (5) of claims 1 and 13, Holter [5,727,832] further discloses a system having the end effector (5), as presented in the above, a supply of items (90,90,90) (see Fig. 1), an industrial robot (75) with the end effector; the end effector having the plate (10) rotatably mounted to the robot (see Fig. 1) wherein the items (90,90,90) are gripped by the end effector.

Allowable Subject Matter

11. Claims 20-22 and 25 are allowed.

12. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claim 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's amendment filed October 20, 2003, and the arguments presented therewith have been fully considered but they are not persuasive.

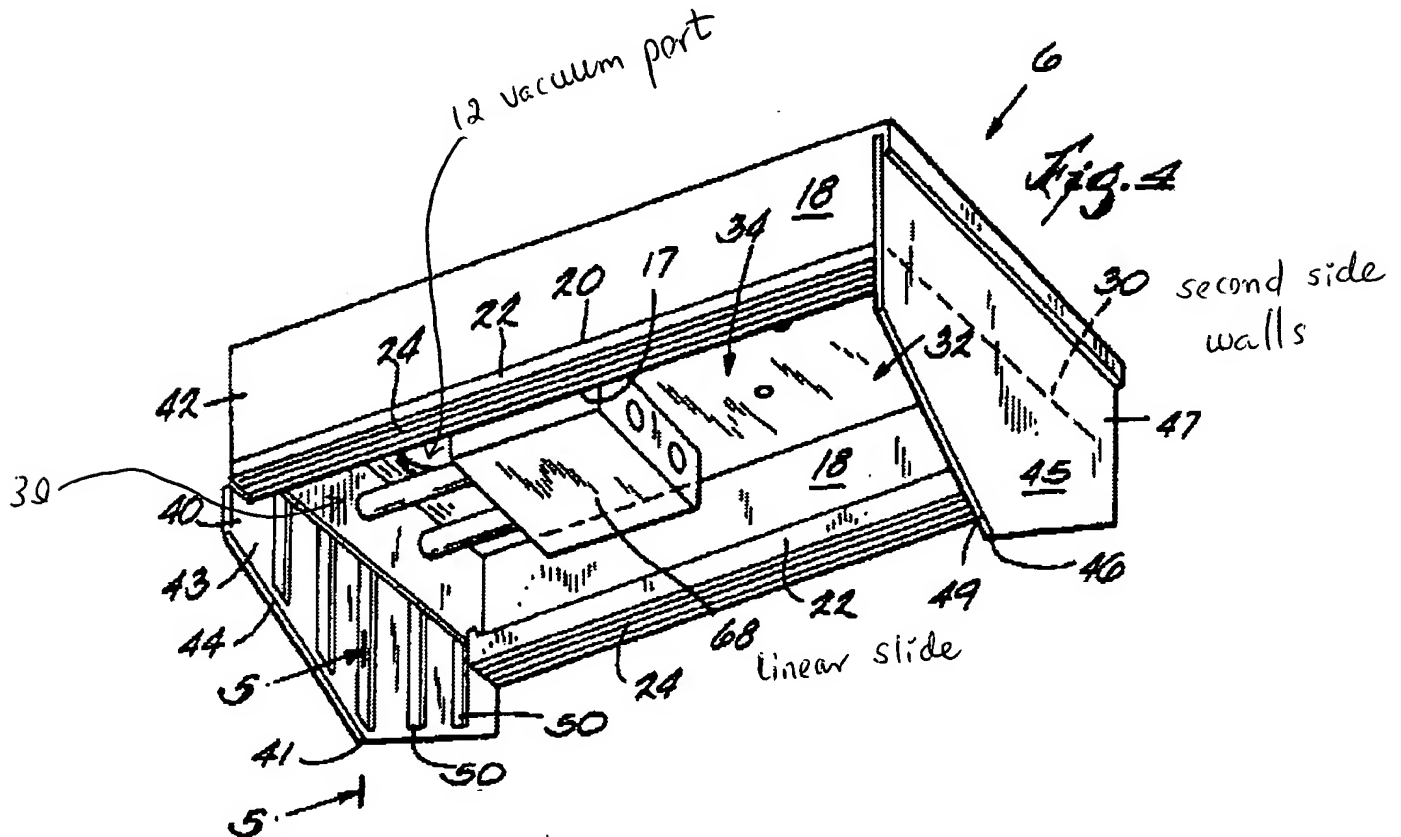
Art Unit: 3652

Applicant argues that Holter's device does not show "the gripping surface being located outboard of the surround." First of all, the word "outboard" is defined as "*Nautical. Situated or positioned outside the hull of a vessel. b. Being in a position that is away from the center line of the hull of a ship; or Situated or positioned toward or nearer the end of a wing of an aircraft*" according to *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992. Therefore, it is pointed out that the first and second gripping elements (40,45) having smooth surfaces (inside and outside surfaces on each blade) are being located outboard (situated or positioned outside or situated or positioned toward or nearer) the surround (18,18,30,30) (see Fig. 4). The prior art discloses a surround including a pair of first side walls (18,18) (see **Exhibit A** (next page) from Fig. 4, and Col 3, lines 42-49) and a pair of second side walls (30,30) (see *dotted lines* in Figs. 3 and 4, and Col 3, lines 54-60) mounted on the base plate (10) wherein the first and second gripping elements (40,45) having smooth surfaces (both inside and outside surfaces on each blade) are located outboard situated or positioned outside or situated or positioned toward or nearer) of the surround (18,18,30,30) (Col 4, lines 12-23).

Moreover, applicant argues that the newly presented limitation of claim 1 ("first and second gripping elements are arranged separately and independently from the vacuum port") is patentably distinguishes from the prior art. The argument is not persuasive because the prior art meets the limitation. Holter's gripper (5,727,832) shows that the first and second gripping elements (40,45) being arranged separately and independently from the vacuum port (12) (see Fig. 4). It is pointed out that the gripping element (40) is being movably coupled a linear slide (68) and being operated separately and independently from the vacuum port (12) wherein the

Art Unit: 3652

gripping element is independently and separately movably mounted and the vacuum port (12) is permanently fixed in the plate (10) (see Exhibit A below).

Exhibit A**Conclusion**

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 3652

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL T. CHIN whose telephone number is (703) 305-1524. The examiner can normally be reached on MON-THURS (7:30 -6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on (703) 308-3248. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.

ptc

PTC
January 6, 2004



EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600